Robert E. Puff, Jr. P.E. Consulting Civil Engineer 53 Cutts Island Lane Kittery Point, ME 03905

July 12, 2022 VIA EMAIL

Ipswich Planning Board Town Hall 25 Green Street Ipswich, MA 01938

RE: 55 Waldingfield Road – Phase 1A
Site Plan Review & Special Permit Applications
5th Drainage and Stormwater Management Review (Task 5)

Mr. Ethan Parsons and Planning Board Members:

As requested, I have continued a drainage and stormwater management review of the above referenced project. In response to the fourth (Task 4) review dated May 11, 2022, I have received the following supplemental or revised plans and documents as prepared by Hancock Associates of Danvers, MA (unless otherwise noted).

- Copy of correspondence from Hancock Associates to the Ipswich Planning Board, dated June 29, 2022, regarding responses to the 'Task 4' review.
- "Permit Site Plan Phase 1A (to accompany a Great Estate Preservation Development Special Permit) 55 Waldingfield Road...." consisting of plan sheets 1, 3, 4, and 5, all dated August 30, 2021, and revised to June 28, 2022.
- "Partial Existing Conditions Plan of Land in Ipswich, MA..." consisting of six (6) plan sheets (2A through 2F), all dated July 1, 2021.
- "Stormwater Report in Support of A Great Estate Preservation Development (GEPD) Special Permit Phase 1A for 55 Waldingfield Road…" dated July 2021 and revised to May 2022, including appendices for a Long Term Pollution Prevention Plan, a Construction Period Pollution Prevention Plan, and an Operation and Maintenance Plan.

After review of the above material, it is my opinion that the drainage and stormwater management design is satisfactory and adequately addresses previously stated comments and opinions. It is suggested that the following minor drafting items be provided on the plan set.

- 1. General Note 11 (on plan sheet 1) should be coordinated with Note 6 (on plan sheet 2A) relative to the Flood Insurance Rate Map referenced for the property.
- 2. The 'Infiltration Trench' detailed on plan sheet 5, should stipulate that intermittent check dams be placed across the trench along easterly sections of the driveway where the driveway slope increases.

<u>Additional Planning Board Considerations:</u> The following items are suggested for consideration by the Planning Board with respect to quality assurance and long term care of the drainage and stormwater management infrastructure.

- 1. In the 'Long Term Pollution Protection Plan' under the heading 'Winter Road Salt and/or Sand use and storage restrictions' it is stated that salt storage piles be located outside of the 100 year buffer zone and shall be covered. It is strongly suggested that permanent on-site salt storage piles be discouraged by the Planning Board, but if salt storage is anticipated, a building enclosure should be required.
- 2. To ensure that construction of the stormwater management system is conducted in accordance with the design, an as-built plan of the completed project should be submitted to the Planning Board along with a report from the engineer of record indicating whether or not construction complies with the design intent. The as-built plan and engineering report should also be appended to the final version of the 'Operation and Maintenance Plan' prepared for the stormwater management system, for the property owner's future use and reference.
  - a. The engineering report should specifically speak to the ability of runoff from the peastone parking area (i.e., the northerly portion of subcatchment P2) to flow across the project driveway and into the lower pasture area, as assumed in the calculations and indicated by flow arrows on the plans.
- 3. Because existing topographical depressions within the pasture are being utilized as part of the stormwater management system, any earthwork that would alter these depressions from what is proposed on the plans should be subject to appropriate hydrologic/hydraulic study and Planning Board review to ensure that the stormwater management design intent is not adversely impacted.
- 4. The following documents are suggested to be incorporated as part of any Planning Board approval:
  - a. The 'Construction Period Pollution Prevention Plan' to clarify responsibilities relative to sedimentation and erosion control during construction.
  - b. The 'Operation and Maintenance Plan' to provide guidance for the long term inspection and maintenance of the drainage and stormwater management systems.
  - c. The 'Long Term Pollution Prevention Plan' (LTPPP) to provide guidance relative to long term management of the site.

Please feel free to contact me if you have any remaining questions or concerns regarding the above comments and opinions.

Very truly yours,	
R.E. Puff	
Robert E. Puff, Jr., PE	-

cc: C Wear, PE (via email)